From the preceding investigations, the following conclusions may be derived.

1st. The pulse of persons labouring under acute insanity, is more rapid than that of those in whom the same disease has assumed its chronic form.

2d. The pulse of the insane, whether the disease be acute or chronic, has a higher mean rapidity than that of the sane who are enjoying physical health.

3d. The general law of diminution in the rapidity of the human pulse, coincident, *pari passu* with advancing age, is abrogated in the insane.

4th. In persons enjoying health, the rapidity of the pulse is nearly one quarter greater when they are under general, though not immoderate, muscular exercise, than when they are in a state of comparative rest.

Art. V.—*Case of Yellow Fever, with Remarks.* By Thomas Stewardson, M. D., one of the Physicians to the Pennsylvania Hospital.

The assistance to be derived from pathological anatomy, in dissipating the obscurity which, until within a comparatively recent period, has shrouded the diagnosis of the different species of the so called idiopathic fevers, is becoming every day more and more apparent; and the idea that these fevers are mere modifications of one and the same disease, the different forms of which are constantly being blended and passing into one another, without essential distinction, appears to be steadily losing ground. No subject in the whole range of medical investigation has proved so fertile a source of discussion, and given rise to so many voluminous productions, as the nature and doctrine of fever—and these discussions, although now much limited by the eminently practical spirit of the age, must for ever continue to be vague, obscure and unsatisfactory, until the essential distinctions between different fevers are established and recognised. For if it be true that the class of fevers includes a number of entirely distinct diseases, it is clear that unless this is first verified, we must be in constant danger of attributing to *fever* in general, what is true only of one of its forms, of misinterpreting facts, and in short, of reasoning false at every step; since we must be ignorant of the limits and connection of many of the phenomena on which such reasoning is founded. To convince ourselves that such has been the result, we have but to look into most of the general treatises on the nature and doctrine of fever. Thus Cullen, for instance, considered its different forms as distinct only in type, and assumed the paroxysm of the intermittent as the basis of all fevers. To do away with this confusion, and establish a clear diagnosis, founded upon the character and seat of the local affection, has been one of the happy results of the cultivation of pathological anatomy; and the knowledge thus acquired, notwithstanding that the intimate nature of fevers is still enveloped in much obscurity, has at least served to dissipate erroneous views, and afford us more accurate and philosophical conceptions in reference to the general doctrine of fevers. But we are far from having already obtained all the light which pathological anatomy is capable of throwing upon the subject in question. It is now only about two years since M. Louis gave to the world the results of his researches into the yellow fever, as it occurred in Gibraltar in the year 1828, and announced the existence of a peculiar alteration of the liver, existing in every case, and thus constituting the essential anatomical character of that disease. With his characteristic caution, he has not dared to assert this to be true of the disease in general, but only of the epidemic which he observed, leaving it to future observers to determine whether the results obtained by him, were equally applicable to the disease, as occurring in other climates and seasons.

To assist in the determination of this question is the chief object which I have in view in the publication of the following case, the only unequivocal example of yellow fever which I have ever witnessed, as for many years the disease has not prevailed in this city, and the only opportunity afforded for observing it, has been, as in the present instance, derived from its accidental occurrence here in individuals lately arrived, and who had contracted the disease elsewhere. To myself the opportunity of observing the post mortem appearances in the following case was particularly gratifying, as it satisfied me of the wide difference between the alteration of the liver here presented, and that described by me in a recent number of this journal, as characterising the cases of remittent.

Samuel Mitchell, seaman, æt. 27, entered the Pennsylvania Hospital September 25th, 1841, at 4 P. M. He had arrived the same day in the brig Georgia, from New Orleans, which port she left on the 28th of August, and one of the crew had died on the 5th of September, after five days illness, in which the body had become yellow. His disease, as well as that of the patient whose history we are about to give, were considered by the mate, from whom these particulars are derived, as unequivocal cases of yellow fever. On Sunday, September 16th, at 2 A. M., Mitchell, while on duty, was seized with a chill, nausea, vomiting of thick greenish fluid, headache, pains in body and limbs, with great prostration. He was taken into the forecastle, where he lay until Saturday, when he got up, and going into the cabin, insisted upon staying there, as it was too wet forward. September 21st, was seized with epistaxis, which returned at various times afterwards; was delirious at night, and on the 23d, began to be more or less comatose. No chill was observed subsequent to the first; he vomited frequently, and complained greatly of pain across the temples and forehead; was purged freely by the captain. On Friday, the day before admission, in order to avoid quarantine, the patient was roused up and taken forward, where he employed himself in coiling a small rope during the visit of the Lazaretto Physician.

25th, 6 P. M.—Stupor and slight wandering, without active delirium; unable to answer questions intelligibly; restlessness; great prostration; eye injected, icterose; no decided heat of head—considerable of body; extremities cool; skin dry and harsh; pulse 112, weak, and very compressible; tongue covered with a brownish crust, and dry, except at edges; sordes about teeth; respiration 26, full; abdomen firm; no tympanitis. ℞. Mist. efferv. ℥ss. every two hours—cold to head—heat to extremities—enema.

At 9 P. M. I saw him, when his general condition was much the same as that just described. The injection had operated freely; stool copious, liquid, brownish, and very fœtid; decided epigastric tenderness; spleen not felt; pupils of natural size; clots of blood in nostrils; no vomiting since admission. Continue cold clothes and effervescing draught—emp. epispas. 6 by 4 inches to back of neck.

At about 11 P. M. the patient seemed sinking; hands cool; pulse very feeble and rapid, with subsultus; when half an ounce of milk punch was directed to be given every hour, under which he rallied, so that at 6 A. M. it was discontinued; but at 9 A. M. was again resumed; the pulse being scarcely perceptible; the tongue dry and brownish, as before; a yellow serum staining the cloths of a saffron colour, is discharging from the blister.

At 12 o'clock I again saw him, when his condition was as follows: Stupor profound, but seems to be partially conscious when spoken to in a very loud voice, when he groans but makes no distinct answer; expression dull, except when roused, when it is wild and unmeaning; features sunken; black clotted blood in nostrils; conjunctiva icterose; lies on his right side, with the head down and the lower limbs drawn up; he resists very much when attempts are made to flex the arms, and evidently suffers much pain, which causes him to cry out when the lower limbs are pressed; slight tremors; temperature of extremities warm, and that of body even hot; forehead cold; the face of a bluish or leaden colour, mixed with a yellowish tinge, which latter exists also on the body; breath cool; pulse frequent, very feeble and small; great tenderness in epigastric and hypochondriac regions; abdomen not tumid, rigid; no dulness on percussion laterally over left false ribs; no vomiting; two dark-coloured free stools. Blankets wrung out of hot water were applied to the body and limbs, whilst at the same time cold was applied to the head and continued for about an hour. He was then wrapped in a dry blanket, removed to another bed, and mustard plasters applied to the lower extremities; after which the restlessness diminished, and the forehead became warmer. Milk punch and carbonate of ammonia were given internally; no material improvement, however, took place; the stupor continued, and a blister was then applied to the whole scalp. In the evening the respiration became stertorous, and about half-past eleven he died.

Autopsy, September 27th, seventeen hours after death; the weather clear and cool. Cadaveric rigidity marked; muscles well developed; abdomen flat; right hypochondrium developed more than left; skin generally of a dull yellow, with bluish marks on sides and thighs, like bruises.

Abdomen.—*Liver* of moderate size, not enlarged, of good firmness, the lower surface of both lobes of a bluish gray colour, the upper surface of a uniform dull mustard colour, or perhaps more nearly resembling that of powdered gamboge; the colour internally was *everywhere uniformly* the same as that of the upper surface; the surface of a section was smooth, and very dry, except where moistened by the blood from the veins, which was watery and pale; of a homogeneous appearance, with scarcely any trace of distinction between the acini and parenchyma; it was not greasy. The *gall bladder*, contracted and pale, contained about ʒij. of viscid, brownish bile. *Spleen* about 4 inches long by 2½ wide, of its usual bluish colour externally; firm in mass; internally of a deep claret colour; a section looking granulated, owing to the white lines of the cut cells of the organ; its cohesion very marked, the finger penetrating it with difficulty. *Stomach* of medium size, containing from one to two ounces of a fluid rather more consistent than water, of a bluish black colour, with which the whole surface of the mucous membrane was more or less stained, being least so along the small curvature; besides this, in the great *cul-de-sac* the membrane was marked with a dull, red injection, in points; surface generally smooth, mamelonated along the middle of the greater curvature on the anterior face of the organ; consistence of mucous coat slight in the great *cul-de-sac*, where it was also thin; elsewhere, rather thinner than usual, and a little softened. In the great *cul-de-sac* at the seat of the red injection, there were several superficial depressions, probably ulcerations, from half a line to a line in diameter. The mucous follicles about pylorus not notably enlarged. *Small intestine*:—The duodenum contained a small quantity of the same fluid as that in the stomach, dying its lining membrane, but not so deeply as the gastric mucous coat; mucous follicles not remarkably developed; the mucous coat itself of ordinary thickness and consistence, or but slightly softened. About 18 inches of the mucous membrane, commencing in the duodenum and extending downwards, was injected with dark red points, in a width of an inch or more, and precisely like that already described as observed in the stomach. The mucous membrane was less and less stained with the colour already described in approaching the end of the ileum, which was nearly of its usual colour. No alteration of the glands of Peyer, nor of the mesenteric glands, nor of those of Brunner. Consistence of the mucous membrane of the lower part of the canal natural; that of the upper not noted. The *large intestine* contained a portion of the same kind of fluid as the stomach, but not so thin; mucous follicles here and there prominent, with black central points, looking not unlike ulcerations. In the lower 18 inches the mucous membrane was rough, thin, or of natural thickness, easily removed, yellowish, and having exactly the appearance of a false membrane. *Kidneys* of natural size and consistence, the internal surface of the calices of the left one of a deep yellow colour.

Thorax. *Lungs*, some adhesion on both sides posteriorly; a few ounces of reddish fluid in each pleural cavity; both crepitant, and from a section flowed a yellowish frothy fluid; texture natural. *Heart* of medium size; no fluid in præcordium; walls firm, of ordinary thickness; lining membrane natural, not yellow; aorta of bright lemon yellow, pulmonary artery of same colour but less intense: a small quantity of fluid blood in the cavities; no coagula anywhere. Periosteum of costal cartilages yellow. *Brain*—dura mater yellowish, veins moderately distended with fluid blood of dark hue. Pia mater and arachnoid not yellowish, moderately easily raised, and otherwise natural. Scarcely any sub-arachnoid effusion. Consistence of brain throughout very firm, its cut surface presenting numerous deep red points; about a drachm of water in the lateral ventricles; central portions very firm.

Remarks. We are unfortunately but imperfectly acquainted with the symptoms under which the patient laboured during the greater part of the course of the disease, as he entered the hospital almost moribund. His attack appears to have commenced about three weeks after leaving New Orleans, where the yellow fever has prevailed to a great extent during the past season, and ten days before his admission into the hospital. Being practically unacquainted with the features of yellow fever, I hesitated as regards the character of the disease, which as well as that of the patient who had died on the passage, was considered by the mate as undoubted yellow fever. The expression of countenance seemed to be different from any I had ever before witnessed; the eye remarkably wild when the patient was much roused; there was an appearance of great distress, restlessness and epigastric tenderness, whilst at the same time neither this region nor the hypochondria were distended. After death the appearances observed were precisely those described by M. Louis, as characterising the yellow fever of Gibraltar. The liver was of the colour of gamboge, remarkably dry and anemic; scarcely any bile in the gall-bladder; the stomach evidently inflamed and containing a black fluid which was also found in the intestinal canal; the spleen nearly natural; the rest of the contents of the abdomen as well as the other organs presenting nothing remarkable excepting the yellow tinge of the aorta, &c. The lesion of the liver was very peculiar and striking, answering precisely to M. Louis's description of that observed at Gibraltar. The colour in the present instance was almost exactly that of powdered gamboge, with which a section of it made after it had macerated for a day or two, was compared in the presence of the class. Besides the alteration of colour, it should be recollected that the liver was very dry and anemic, and that scarcely any bile was found in the gall-bladder, so that the secretion of this fluid would seem to have been almost arrested. The inflammation of the stomach was far from being severe, and the amount of black matter contained in it and the intestinal canal was not great, entirely insufficient certainly to account for the fatal termination, which can only be explained by admitting some change, probably of the blood, inappreciable by the ordinary methods of investigation, but sufficient to compromise the functions of important organs. It is possible indeed that this change, supposing it to be one of the blood, may have been a consequence of the lesion of the liver, as recent investigation seems strongly to confirm the idea, that a principal function of this organ is, like that of the lungs, to purify the blood and thus render it more fit for the support of the vital action. Still, however, even on this supposition, the alteration of the circulating fluid must be considered as the immediate cause of death.

In conclusion let us note the similarities and discrepancies which exist between the post mortem appearances, observed by M. Louis in yellow fever, and those observed by me in remittent fever, and described in the April number of this journal for the past year. In both, the organs contained in the cavities of the chest and cranium were found either entirely healthy or the seat only of such secondary changes as are common to many acute affections, if we except the frequent occurrence in yellow fever of certain blackish spots or masses in the lungs, dependent in great measure upon the exhalation of blood into their tissue, and also the frequent destruction of the epidermis of the œsophagus in the same disease. In both, the liver was in every case the seat of a peculiar alteration, having certain common characters, but strikingly different in the two diseases. In both, the stomach was in the great majority of cases inflamed, whilst the remainder of the intestinal canal, the mesenteric glands and kidneys were healthy or nearly so. On the other hand we find no less striking differences. Thus in yellow fever, the liver without much alteration of size or consistence, was yellow, anemic, with but little bile in the gall-bladder, whilst in remittent it was generally enlarged and flabby, and always of a dark colour more or less resembling bronze, with a gall-bladder for the most part fully distended. In yellow fever the stomach or some part of the intestinal canal mostly contained a fluid black matter which was absent in remittent. The spleen in yellow fever was healthy or nearly so, whilst in remittent it was the seat of extreme softening and enlargement. A consideration of these three points of difference seems to me to be of the last importance in determining the question of whether yellow and bilious remitting fevers are distinct diseases. That they are so is now perhaps the most generally received opinion, derived from a comparison not merely of the difference of symptoms but of the circumstances of their origin and prevalence, and if to these we add the differences in the post mortem appearances above mentioned, scarcely a doubt, I think, can be entertained but that this opinion is correct. The enlargement and softening of the spleen in the bilious remitting and other types of fever originating from marsh miasmata, is a prominent fact attested by most writers who have investigated the pathological appearances of disease in warm climates; and this fact alone is almost sufficient to convince us that yellow fever, in which the spleen rarely presents any considerable traces of disease, must be essentially distinct in its nature and origin. The very opposite conditions of the liver and of the biliary secretion are worthy of especial attention, in reference to the present question, especially as the increase of this secretion in the one disease, and its diminution in the other, are severally characteristic of them throughout their whole course, as shown by an appeal to symptoms. To these, however, I will not allude further at present, as I shall shortly have occasion to recur to them in the continuation of my observations upon remittent fever.

Art. VI.—*Case of Tetanus, following a retained Placenta.* Read to the Boston Society for Medical Improvement, October 11th, 1841. By D. Humphrey Storer, M. D., of Boston, Mass.

The management of the placenta requires, in the great majority of the cases of midwifery, so little attention, and causes in reality such slight trouble to the accoucheur, that although he may frequently meet with elaborate treatises pointing out the necessity of the greatest care and skill and judgment upon these occasions; and even find minutely described cases, in which fatal consequences have supervened upon the occurrence of circumstances connected with its removal, he heeds them but little, until something out of the common course of events happens in his own private practice—until he is compelled himself to manage some case of emergency.

Much has been written upon the dangers to be feared from the *retention* of the placenta, but, since the Hunterian doctrine, that a direct communication exists between the uterus and placenta by means of large vessels, has given way to the opinion, that the connecting vessels are exceedingly minute; or I might perhaps add, to the more recent belief, that the circulation between the uterus and the placenta, is performed by endosmose or imbibition, less is thought of the delivery of the secundines—of the time or manner in which they should be removed.

It is truly surprising to observe the changes which have taken place in the opinions of physicians respecting the necessity of early removing the placenta. But a few years since, did a physician fail to free a patient he may have delivered, of her afterbirth within a few hours after the birth of her child, he not only lost the confidence of her friends, but felt himself, his patient could not be safe until it was manually removed. Now we are frequently meeting with cases in the journals, in which the placenta has been retained for weeks and months without serious consequences, and where years even, have passed by, without any preceptible portion having been thrown off; leading to the conclusion that it must have been absorbed.

In the *London Medical Gazette*, for February, 1828, Mr. Thornton relates the case of a lady, who aborted at a little beyond her fifth month. The placenta did not come away with the embryo. The lady continued in